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(21) International Application Number: PCT/AU95/00846 (22) International Filing Date: 14 December 1995 (14.12.95) (30) Priority Data: PN 5423 15 September 1995 (15.09.95) AU (71)(72) Applicants and Inventors: MCDONALD, Allan, Richard [AU/AU]; 16 Barmah Court, Baxter, VIC 3911 (AU). MCDONALD, Vivienne [AU/AU]; 16 Barmah Court, Baxter, VIC 3911 (AU). (74) Agent: A. TATLOCK & ASSOCIATES; 208 Elgin Street, Carlton, VIC 3053 (AU).		(81) Designated States: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT, UA, UG, US, UZ, VN, ARIPO patent (KE, LS, MW, SD, SZ, UG), European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i>
(54) Title: FISHING SINKER (57) Abstract A fishing sinker made of metal coated with a material which is resistant to water and which material has a mechanical strength such that the sinker is substantially protected from delivering material to the water, when in use. Such a sinker limits the amount of metal introduced to the marine environment by chemical processes and rather is coated in a material which can be impregnated with fish oils or other such substances which attract fish.		

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FISHING SINKER

This invention relates to fishing sinkers which are covered in some protective coating intended to minimise environmental damage from such sinkers and in particular to such sinkers coated in rubber or plastic.

The most common form of fish sinkers are those composed of lead however it has been discovered that lead molecules, through various chemical reactions, can be released into the water which can lead to a build up of lead in the water where fishing occurs.

This consequently leads to the accumulation of lead in fish which feed in the polluted environment and ultimately there is a danger that lead poisoning can occur in people who eat the fish.

While this may not appear to be a significant problem as yet in oceans it is quite possible that in enclosed lakes, bays and other waterways lead pollution could accumulate and this is a form of pollution to which young children in particular have been found to be susceptible.

Given that the environmental effects of ordinary lead sinkers are a cause for concern the major object of this invention is

to provide a sinker which is coated with a protective covering thus minimising or overcoming the above stated problem.

While any appropriate type of covering could be used it is preferred in this invention that either a rubber or plastic coating be used.

The invention in its broadest sense comprises a fishing sinker made of metal coated with a material which is resistant to water and which material has a mechanical strength such that the sinker is substantially protected from delivering material to the water, when in use.

The sinkers can be of a multitude of shapes and sizes and can be either single or used in combination with other sinkers. In addition it is envisaged that the coating material can be coloured with iridescent colours or such although the precise colours chosen are not germane to the invention.

It is however a desired feature of a preferred embodiment of the invention that the coating material be capable of being impregnated with natural or artificial fish oils or any combination thereof. A rubber coating can be particularly successful in this regard although various synthetic products both smooth or meshed can provide for the impregnation of such oils.

The basic requirement for the metal coated sinker is that it needs to be coated with an impervious material which is both water resistant and appropriately durable to prevent it from being damaged if and when it is dragged along rocks and other debris when in use.

The impervious material which the metal sinker could be coated with may in a preferred embodiment be a plastic resin or latex or synthetic rubber.

If the impervious material is a plastic resin, a method of placing the resin onto the metal sinker would be to dip the sinker into a molten solution of the plastic resin and allow the coating to cool.

If the impervious material is latex or synthetic rubber, a method of placing the resin onto the metal sinker would be to dip the sinker into liquid latex or synthetic rubber, draining the excess latex or synthetic rubber and allowing it to dry. This process being repeated until several layers are attached to the sinker, producing an appropriate covering.

It is also envisaged that the metal sinker could first be coated with some adhesive material prior to the above described processes being carried out.

The impervious metal sinker can come in a multitude of shapes and sizes, the most common being a sphere through which there are small apertures to allow the fishing line to be attached, though sinkers the shape of cubes or pyramids as well as a host of other polyhedrons could also be produced.

The sinkers could also come in a variety of sizes which would be appropriate for the particular fishing activity undertaken, a larger sinker being needed for thicker fishing line when one is undertaking to catch larger aquatic creatures, a thinner line and thus smaller sinker being required when one is attempting to catch smaller aquatic creatures.

The metal sinker could also come in a single or combination of iridescent colours to attract the attention of aquatic creatures.

A further aspect of the invention relates to the fact that the sinker with the impervious coating is capable of being impregnated with natural or artificial fish oils or any combination thereof, which when placed in the water will be released thus acting as a berley.

Conventional fishing sinkers are either attached directly to a fishing line through some eye or other device however other sinkers are designed for the line to pass through them. It is

envisaged also that there will be an embodiment of the invention in which the hole through such sinkers is also coated however as this is usually a small part of the surface area of a sinker such an embodiment is presumably less environmentally necessary.

The essence of this invention is that there is provided a fishing sinker whose surface area is coated in a material which will prevent chemical dissociation of the metal, usually lead, products into the water which fish inhabit. This sinker is available in any variety of shapes or colours, such that it can exhibit some of the features of a lure, and its preferred coating can be impregnated with oils or other compounds which attract fish.

We claim:

1. A fishing sinker made of metal coated with a material which is resistant to water and which material has a mechanical strength such that the sinker is substantially protected from delivering material to the water, when in use.
2. A fishing sinker as claimed in Claim 1 wherein the sinker may be of any required shape and any required size.
3. A fishing sinker as claimed in either of claim 1 or claim 2 having different shapes and the coatings being of different colours.
4. A fishing sinker as claimed in any one of claims 1 to 3 wherein the coating is of natural rubber.
5. A fishing sinker as claimed in any one of claims 1 to 3 wherein the coating is of a synthetic rubber or some other plastic or synthetic material.
6. A fishing sinker, as claimed in any preceding claim being capable of being impregnated with natural or artificial fish oils or any combination thereof.

7. A method of making a coated metal sinker comprising placing a coating onto the metal sinker by dipping the sinker into a molten solution of a plastic resin and allow the coating to cool.
8. A method of making a coated metal sinker comprising placing a coating onto the metal sinker by dipping the sinker into liquid latex or other soluble material, draining the excess latex or other soluble material, allowing it to dry, and repeating this process until the coating is of the required thickness.
9. A method as claimed in claim 8 wherein the coating of the sinker is subsequently cured.
10. A method as claimed in either claim 8 or claim 9 wherein an adhesive or the like is placed on the sinker before the coating process.

INTERNATIONAL SEARCH REPORT

International Application No.
PCT/AU 95/00846

A. CLASSIFICATION OF SUBJECT MATTER

Int Cl⁶: A01K 95/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC:A01K 95/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
AU: IPC as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
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C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4942689 A (LINK et al) 24 July 1990 column 3 lines 53-60	1-6, 8-9
X	AU 17399/88 A (ARMSTRONG et al) 22 December 1988 page 2 lines 7-10, page 3 lines 14-21	1-6, 8-9

☒ Further documents are listed in the continuation of Box C

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Date of the actual completion of the international search
18 January 1996

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INTERNATIONAL SEARCH REPORT

International Application N.
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C (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	Engineering with Rubber, first edition, edited by WALTER E. BURTON, published by McGRAW-HILL BOOK COMPANY, INC. in 1949 paragraph bridging pages 64-65	8-9
X	US 3557486 A (WRIGHT) 26 January 1971 column 3 lines 33-54	1-6
Y	column 3 lines 33-54	7-10
Y	Plastics Engineering Handbook of THE SOCIETY OF THE PLASTICS INDUSTRY, INC., second edition, published by REINHOLD PUBLISHING CORPORATION, New York in 1954 pages 298-307	7-10
X	GB 2139861 A (HAYWOOD) 21 November 1984 page 1 lines 85-89	1-3, 5
Y	page 1 lines 35-36	7-10